

What is claimed is:

1. An apparatus for making an item, comprising:
a container having an interior and at least one opening;
a flexible membrane retained to said container that extends across said opening to seal said interior;
support media disposed within said container in said interior; and
a valve connected to said container that allows a vacuum force to be applied to said interior of said container.
2. The apparatus according to claim 1, wherein said support media comprises ceramic pellets.
3. The apparatus according to claim 1, wherein said support media comprises ceramic spheres.
4. The apparatus according to claim 2, wherein grams of said similar material have a size ranging in diameter of approximately 0.020" to approximately 0.25".
5. The apparatus according to claim 1, wherein said container comprises:
a base;
a first side wall connected to said base that extends upward from said base;
a second side wall connected to said base that extends upward from said base, wherein said second side wall opposes said first side wall;
a third side wall connected to said base that extends upward from said base, wherein said third side wall space between first side wall and said second side wall;
and

a fourth side wall connected to said base that extends upward from said base, wherein said fourth side wall opposes said third side wall.

6. The apparatus according to claim 1, wherein said container is generally box shaped.

7. The apparatus according to claim 1, wherein said flexible membrane comprises a silicone, rubber membrane.

8. The apparatus according to claim 1, further comprising a vibrating device mounted to said container that vibrates said media disposed within said container.

9. The apparatus according to claim 1, further comprising a vibrating device submerged within said media that vibrates said media disposed within said container.

10. The apparatus according to claim 1, further comprising a retaining ring that retains said flexible membrane to said container.

11. The apparatus according to claim 10, wherein said retaining ring is constructed at least partially from plastic, metal and/or medium density fiberboard (MDF).

12. The apparatus according to claim 1, further comprising an inflatable air bladder disposed within said container.

13. The apparatus according to claim 1, further comprising a top, removably mounted onto said container.

14. The apparatus according to claim 13, further comprising a latching system that latches said top onto said container.

15. The apparatus according to claim 13, further comprising a seal mounted to said top, wherein said seal provides a seal between said top and said container.

16. The apparatus according to claim 13, further comprising a support frame assembly that translates said top to a mounted position on said container.

17. The apparatus according to claim 16, wherein said frame support assembly translates said top to an unmounted position.

18. The apparatus according to claim 16, wherein said frame support assembly comprises a pulley system.

19. The apparatus according to claim 13, further comprising:
a first guide post connected to said container; and
a second guide post connected to said container.

20. The apparatus according to claim 19, further comprising a third guide post connected to said container that opposes said first guide post.

21. A method for producing an item using a mold plug having a shape, comprising the steps of:

providing a tool apparatus including a container with support media disposed therein and a flexible membrane;

pressing the mold plug against the flexible membrane to cause the membrane to contour to the shape of the plug, and displacing the support media disposed within the container so that it packs against the mold plug;

applying a vacuum force to the container to cause the support media to become compacted so that the support media and the flexible membrane substantially retain the shape of the mold plug; and

removing the mold plug.

22. The method according to claim 21, further comprising the step of inflating an air bladder disposed within the container.

23. The method according to claim 21, further comprising the step of removing the mold plug and applying at least one application of a mold substrate to the flexible membrane.

24. The method according to claim 21, further comprising the step of removing at least one application of the mold substrate.

25. The method according to claim 24, further comprising the step of applying a second application of the mold substrate.

26. The method according to claim 21, further comprising the step of inserting a cast hardware and/or insert block into the mold.

27. An apparatus for making an item using a mold plug, comprising:

means for providing a tool apparatus including a container with support media disposed therein and a flexible membrane;

means for pressing the mold plug against the flexible membrane to cause the flexible membrane to contour to the shape of the mold plug, and displacing the support media disposed within the container so that it packs against the mold plug;

means for applying a vacuum force to the container to cause the support media to become compacted so that the support media and the flexible membrane substantially retain the shape of the mold plug; and

means for removing the mold plug.

28. A method for producing an item using a mold plug having a shape, comprising the steps of:

disposing a template part within the mold plug;

attaching the mold plug to a strong back;

providing a tool apparatus including a container with support media disposed therein and a flexible membrane;

pressing the mold plug against the flexible membrane to cause the membrane to contour to the shape of the plug, and displacing the support media disposed within the container so that it packs against the mold plug;

applying a vacuum force to the container to cause the support media to become compacted so that the support media and the flexible membrane substantially retain the shape of the mold plug; and

removing the mold plug.

29. The method according to claim 28, further comprising the step of inflating an air bladder disposed within the container.

30. The method according to claim 28, further comprising the steps of:

removing the template part from the mold plug; and
inserting the mold plug into the tool apparatus to form a closed mold.

31. An apparatus for making an item, comprising:
a container having an interior and at least one opening;
a flexible membrane retained to said container that extends across said opening to seal said interior; and
support media disposed within said container in said interior, wherein said support media is an electrorheological or magnetorheological fluid.